



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/786,534	02/25/2004	Nicolai Tarasinski	09163-US	3254
30689 7590 04/18/2007 DEERE & COMPANY ONE JOHN DEERE PLACE MOLINE, IL 61265			EXAMINER LE, DAVID D	
			ART UNIT 3681	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE 3 MONTHS		MAIL DATE 04/18/2007		DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	Application No. 10/786,534	Applicant(s) TARASINSKI, NICOLAI	
	Examiner David D. Le	Art Unit 3681	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 February 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,2,4,5,9-11,16 and 18 is/are pending in the application.
- 4a) Of the above claim(s) 16 and 18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,5 and 9-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. This is the fourth Office action on the merits of Application No. 10/786,534, filed on 25 February 2004. Claims 1, 2, 4, 5, 9-11, 16 and 18 are pending. Of those pending claims, claims 16 and 18 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Species.

### **Documents**

2. The following documents have been received and filed as part of the patent application:
- Information Disclosure Statement, received on 02/25/04
  - Foreign Priority Document, received on 02/25/04
  - Declaration and Power of Attorney, received on 05/27/04
  - Information Disclosure Statements, received on 02/07/05

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. **Claims 1, 2, 4, 5 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by U. S. Patent No. 6,383,106 to Kashiwase.**

Claims 1, 2, 4, 5 and 9:

**Kashiwase** (i.e., Figs. 1-9; column2, line 61 – column 7, line 19) discloses a power transmitting system for a hybrid vehicle comprising:

- A planetary gearbox (i.e., Fig. 1, element 3);
- A first motor/generator (i.e., Fig. 1, element 4);
- An internal combustion engine (i.e., Fig. 1, element 1);
- A power take-off shaft (i.e., Fig. 1, element 5a), which is capable of driving an attached implement;
- A first gearbox interface (i.e., Fig. 1, being the portion of shaft 1a that connects with sun gear 3a of the planetary gearbox) being driven by said engine;
- A second gearbox interface (i.e., Fig. 1, being the shaft portion of said first motor 4 that connects with ring gear 3c of said planetary gearbox);
- A third gearbox interface (i.e., Fig. 1, being the portion of carrier 3b that connects with said power take-off shaft 5a);
- A second motor/generator (i.e., Fig. 1, element 2) driven directly by the internal combustion engine (1);
- A control arrangement (i.e., Fig. 1, element 10);
- Wherein said hybrid vehicle inherently includes a wheel brake for stopping said power take-off shaft (5a) (i.e., column 3, lines 37-48);
- Wherein said power transmitting system inherently includes a rectifier, which is associated with each of said first and second motor/generator (i.e., column 4, lines 46-52);

Art Unit: 3681

- Wherein the control arrangement inherently uses various sensors to control the engine, the first motor/generator, the second motor/generator, the rectifiers, and the wheel brake (i.e., column 3, line 31 – column 6, line 50); and
- Wherein the planetary gearbox (i.e., Fig. 1, element 3) is considered as a torque division gearbox for the power take-off shaft.

Note:

It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

***Claim Rejections - 35 USC § 103***

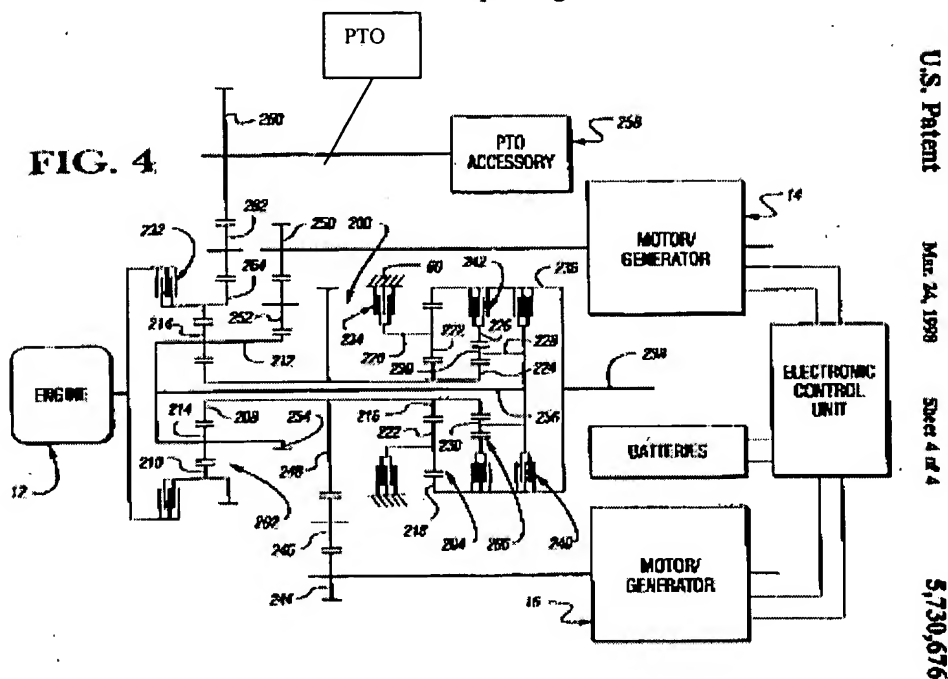
5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 1, 2, 4, 5 and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over U. S. Patent No. 5,730,676 to Schmidt in view of U. S. Patent No. 6,205,385 to Stelzle et al.**

Claims 1, 2, 4, 5 and 9-11:

*Schmidt* (i.e., Figs. 1-4; column 1, line 30 – column 7, line 54) discloses an electro-mechanical transmission comprising:



- A planetary combination gearbox (i.e., Fig. 4, element 202);
- A first electrical machine (i.e., Fig. 4, element 14);
- A power take-off shaft (i.e., Fig. 4, element PTO as indicated above);
- A gearbox interface (i.e., Fig. 4, element 248) operatively driven by an internal combustion engine (i.e., Fig. 4, element 12);
- A second electrical machine (i.e., Fig. 4, element 16) driven indirectly by the internal combustion engine (12);
- A control arrangement controlling the internal combustion engine, the first electrical machine, the second electrical machine and at least one rectifier (i.e., Fig. 4; column 5, line 29 – column 7, line 54; it should be understood that the

ECU controls the engine output through controlling the engagement of clutch 232);

- Wherein the control arrangement inherently includes a rectifier associated with each of the first and second electrical machines so that each of the electrical machines can be switched in both directions of rotation and both directions of torque (i.e., column 2, line 63 – column 3, line 27);
- Wherein the first electrical machine is connected with a second gearbox interface (i.e., Fig. 4, element 212) of the planetary combination gearbox (202), and the power take-off shaft (PTO) is connected with a third gearbox interface (i.e., Fig. 4, element 264) of the planetary combination gearbox (202);
- Wherein the first and second electrical machines can be operated as generators or as motors (i.e., column 5, line 29 – column 6, line 57);
- Wherein the control arrangement inherently uses various sensors to control the engine, the first and second electrical machines and the rectifiers;
- Wherein the first electrical machine, the second electrical machine and the planetary combination gearbox can be combined to an infinitely variable torque division gearbox for the power take-off (i.e., Fig. 2) and;
- Wherein the second electric machine can be operated as a generator and the first electrical machine can be operated as an electric motor (i.e., column 6, lines 45-50).

Schmidt lacks a brake with which the power take-off shaft can be stopped.

*Stelzle* (i.e., Fig. 2; column 4, line 14 – column 5, line 2), on the other hand, teaches a control system for controlling a power takeoff comprising:

- An engine (i.e., Fig. 2, element 52);
- A power takeoff shaft (i.e., Fig. 2, element 18);
- A power takeoff clutch (i.e., Fig. 2, element 54);
- A power takeoff brake (i.e., Fig. 2, element 70); and
- A control arrangement (i.e., Fig. 2, element 50) for controlling the engagement of the power takeoff brake (70) to inhibit rotational of motion of the power takeoff shaft.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Schmidt to include a power takeoff brake, in view of *Stelzle*, in order to effectively control the rotational motion of the power takeoff shaft.

#### *Response to Arguments*

7. Applicant's arguments filed on 26 February 2007 have been fully considered but they are not persuasive.

First, applicant argues that Kashiwase does not control the brake but simply senses the condition of the brake and uses this information to control the operation of the engine and motors. Examiner respectfully disagrees because Kashiwase, i.e., column 3, lines 37-48, discloses:



*“The driver's intention determining system 11 detects depression operation of accelerator pedal and brake pedal, and steering angle, thereby determining driving operation condition dependent on the operation of the driver. The vehicle control condition determining system 12 determines brake pedal depression condition, control quantity for the engine and the ABS (Anti-lock Braking System), and operating conditions of lights, an air conditioner and others. The driving condition determining system 13 determines the change of driving condition such as vehicle speed, ascending and descending, and road surface conditions.”*

Since the present claims do not specifically require how the control arrangement controls the brake, the control system 10 of Kashiwase, as stated above, controls the wheel brake through the ABS (Anti-lock Brake System).

Second, applicant argues that neither of the control schemes disclosed in Schmidt or Stelzle contemplates controlling the engine in any way. Examiner respectfully disagrees for the reason as follows:

Since the present claim 1 does not specifically require how or in what aspect that the control arrangement controls the engine, the ECU of Schmidt, at the very least, controls the transferring of engine power to the transmission.

Accordingly, as set forth above, the applied references meet the claimed limitations.

*Conclusion*

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David D. Le whose telephone number is 571-272-7092. The examiner can normally be reached on Mon-Fri (0700-1530).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles A. Marmor can be reached on 571-272-7095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'David D. Le', with a long horizontal flourish extending to the right.

David D. Le  
Examiner  
Art Unit 3681  
04/15/2007

ddl